A year to remember

2 January 2008

Looking back at 2007, the weather and climate change have never been far from the headlines meaning the Met Office has had another busy year.

"…the Met Office provides a service which is second to none in helping the UK understand and make the most of the weather in this country and overseas."

Under-Secretary of State for Defence, Derek Twigg

For many people in the UK, 2007 will be remembered as the year without a summer. The extreme rainfall of May, June and July and the large-scale flooding that followed gripped the nation for much of the summer, and the consequences are still being felt by many of those affected.

The Met Office played a vital and significant role during the summer, providing excellent forecasts and warnings ahead of the heavy rains. Ahead of, and during the flooding we worked with the Environment Agency (EA), emergency planners and advised COBRA so that the nation was as prepared as possible for the exceptional rainfall. But our work didn't stop once the rain did - we have since been working with local councils, government and insurers throughout the clean-up operation to get those affected back on their feet as quickly as possible.

The Review has received largely positive evidence from the public on the accuracy and timeliness of the Met Office's severe Weather Warnings…

The Pitt Review, December 2007

"The flooding event in East Anglia came within a whisker of widespread flooding. This is a good example of how well the Environment Agency, the Met Office and emergency services worked together to warn and evacuate people in good time."

Barbara Young, CE of the Environment Agency

Heavy rain is just one cause of flooding, and we were put to the test again in November as one of the largest North Sea storm surges since 1953 affected the east coast. As is the case whenever the weather or climate has a major impact, the Met Office was at the centre of the response, advising government and the Environment Agency on the areas most at risk. Our well-timed and accurate forecasts allowed local councils to prepare for possible flooding, protecting lives and property along the east coast of England.

The Met Office Hadley Centre has also had a very successful year, undertaking more climate-change research than ever before, as well as helping business mitigate and adapt to the challenges of our changing climate.

Scientific highlights from the Met Office Hadley Centre in 2007 include:

- findings that increasing levels of ozone near the earth's surface is leading to a reduction in plant and crop growth. This impacts plants' ability to soak up carbon dioxide from the atmosphere, accelerating global warming;
- findings that increasing carbon dioxide levels make plants less thirsty, leaving more water to drain into rivers which will add to the river-flow increases already expected due to climate change;
- evidence than humans have an influence on global surface humidity – causing a more humid world, exacerbating the affects global warming;
- reports into the impacts of climate change on the fate of the Amazon rainforest;
- our first ever forecast for the next ten years – in 2014 the world will be 0.3 °C warmer than 2004, with at least half of the years after 2009 predicted to exceed the warmest year currently on record.

The Intergovernmental Panel on Climate Change (IPCC) published its Fourth Assessment Report in 2007. As the UK's foremost climate research centre, the Met Office Hadley Centre was the single most influential scientific contributor to the Working Group I report – The Physical Science Basis of Climate Change; a significant contributor to the Working Group II report on impacts, adaptation and vulnerability; and our scientists were lead authors on the summary report published in November.

"The Met Office Hadley Centre has the highest concentration of absolutely outstanding people who do absolutely outstanding work, spanning the breadth of modelling, attribution, and data analysis, of anywhere in the world."

Dr Susan Solomon, Co-chair IPCC WGI

The IPCC were joint-winners of the Nobel Peace Prize for 2007 and we were honoured that Met Office climate scientist and IPCC lead author, Richard Wood, was invited to attend the awards ceremony in Oslo, representing his colleagues who have contributed world-leading science to IPCC assessment reports over many years.

"It is beyond dispute that the Met Office Hadley Centre occupies a position at the pinnacle of world climate science, and in translating that science into valuable policy advice."

MoD/Defra Met Office Hadley Centre Review March 2007

The climate science from the Met Office Hadley Centre not only enhances the world's understanding of the science of climate change, but also helps inform government policy as demonstrated at the UN Climate Change Conference in Bali in December.

During 2007, Met Office Consulting undertook groundbreaking work to help businesses prepare for a world under climate change. In a specially commissioned study, the Met Office used its regional climate models to explore the effects of climate change and sea-level rises at British Energy's nuclear sites across the UK. The report will help them plan measures to ensure their power stations are kept safe from rising sea levels.

The Met Office has since signed agreements with the majority of the UK energy industry to examine the impacts of climate change on their strategy, operations and planning; has worked with the CBI Task Force on Climate Change and issued its first ever North Atlantic Tropical Storm season forecast. This forecast provided unparalleled accuracy and advice in trials during 2005 and 2006 and again this year, with an excellent forecast of the number of named tropical storms likely throughout the season (June to November). These forecasts ensure we provide accurate advice on the possible impacts and risks of tropical storms to businesses ranging from financial markets, insurers and the oil industry.

"The Met Office has some of the best weather and climate change science in the world. We can help British business achieve competitive advantage by being at the forefront of both climate change mitigation and adaptation."

Robert Napier, Met Office Chairman

Elsewhere in the world, Cyclone Sidr brought devastation to low-lying Bangladesh with torrential rain causing terrible flooding and a huge death toll. In December the Met Office signed an agreement with the Bangladesh Meteorology Department to offer guidance and assistance in forecasting tropical storms in the Indian Ocean. With climate change perhaps meaning an increase in tropical storm frequency this is just one example of how Met Office expertise is hoped to bring worldwide benefits.

2007 was one of the mildest on record across the UK, which means the last six years have been the warmest six on record. As the impacts of climate change begin to take hold the Met Office is ready to help governments and business prepare for and adapt to a changing climate and to help you make the most of what 2008 has to hold.

Notes to editors:

- COBRA is the acronym given to the civil contingencies committee which leads responses to national crises. The group is named after the Cabinet Office Briefing Room A, which normally meets in Downing Street.

For further information:

Met Office Press Office +44 (0)1392 886655
E-mail: pressoffice@metoffice.gov.uk

Met Office Customer Centre 0870 900 0100
If you're outside the UK +44 (0)1392 885680